REMARKS

Claims 1-21 are pending in the application. Independent claims 1, 8, 13, 14, 15, 17, 18 and 19 are amended by this Amendment and new claim 21 is added.

Claim Rejections

The present rejections are summarized as follows:

(1) The Examiner rejected claims 1, 3, 4, 7, 8, 10 and 14-16 under §102(b) as being anticipated by Moore et al. (6,064,003; hereinafter "Moore"). Applicants respectfully traverse this rejection as follows.

(2) The Examiner rejected claims 2, 6 and 9 under §103(a) as being unpatentable over Moore in view of Knapp (4,521,064). Applicants respectfully traverse this rejection as follows.

(3) The Examiner rejected claim 5 under § 103(a) as being unpatentable over Moore in view of Huchison (US 4,070,084). Applicants respectfully traverse this rejection as neither Huchison nor Moore teach or suggest "a foam ratio selected to substantially match the impedance of the connection portion with the covering of the conductor," as recited in claim 1 from which claim 5 is dependent.

(4) The Examiner rejected claim 11 under § 103(a) as being unpatentable over Moore in view of Urushibata et al. (US 5,057,650; hereinafter "Urushibata"). Applicants respectfully traverse this rejection as neither Urushibata nor Moore teach or suggest "a foam ratio selected to substantially match the impedance of the connection portion with the covering of the conductor," as recited in claim 8.

(5) The Examiner rejected claim 12 under § 103(a) as being unpatentable over Moore in view of Bates (4,864,081). Applicants respectfully traverse this rejection as neither Bates nor Moore teach or suggest "a foam ratio selected to substantially match the impedance of the connection portion with the covering of the conductor," as recited in claim 8 from which claim 12 depends.

(6) The Examiner rejected claims 13 and 17 under §103(a) as being unpatentable over Beamenderfer et al. (US 4,834,674; hereinafter "Beamenderfer") in view of Moore. Applicants respectfully traverse this rejection as neither Beamenderfer nor Moore teach or suggest "a foam ratio selected to substantially match the impedance of the connection portion with the covering of the conductor," as recited in claims 13 and 17.

(7) The Examiner rejected claim 18 under §103(a) as being unpatentable over Ichikawa et al. (US 5,780,774; hereinafter Ichikawa) in view of Moore. Applicants respectfully traverse this rejection because one of ordinary skill would not combine the references as alleged, and even if combined, the references fail to teach or suggest all the features of claim 18.

(8) The Examiner rejected claim 19 under §103(a) as being unpatentable over Ichikawa in view of Bates. Applicants respectfully traverse this rejection because the applied combination fails to teach or suggest "wherein the foam resin tape has a predetermined foam ratio selected to substantially match the impedance of the connection portions with the covering of the conductor."

Claim 1 as amended recites:

An electrical connector comprising:

a conductor exposed from a covering;

a connection portion of the conductor connected to a connection portion of a terminal;

a connector housing receiving the terminal;

an impedance control means fixed on the connection portions of the conductor and the terminal; and

a second covering that covers a part of the covering, the impedance control means and a part of the connector housing, wherein

the impedance control means is a foam resin controlling an impedance in terms of a foam ratio that is selected so that an impedance of the connection portions substantially match the impedance of the covering of the conductor.

The claimed invention may compensate for a discontinuity of an impedance distribution along a cable at an exposed conductor portion inside a connector structure, i.e. connection portions of a conductor and a terminal by use of a foam resin, thereby, an impedance matching about the connection portion is achieved. See Specification, page 1, line 15-page 2, line 8 and Fig. 6 (PO).

Moore et al. merely discloses a closed cell foam covering (72) of a connector (60) as a sealing member to provide a water-tight seal over connection portions of the terminals and connectors or has a slit adapted to engage and sealingly retain a flat electrical cable (20) together with a connector housing (74) as illustrated in Figs. 6-9. However, Moore et al. fails to show an

impedance control means (31, 33A/33B, 34) fixed on, the connection portions of the conductor (23) and the terminal (11) and covered by a second covering (32) (See Claim 1). The closed cell foam covering of Moore et al., which faces outward of the connector, rather relates with the second covering of the invention as recited in claim 1.

In this regard, the impedance control means of claim 1 should be located closed to and put on the connection portions of the conductor and the terminal to match the impedance thereof with respect to the covering of the conductor, thereby, a continuity of impedance distribution along the cable is achieved. Therefore, the foam resin as an impedance control means should be fixed on the connection portions of the conductor and the terminal in order to adjust a permittivity ε in terms of a foam ratio with respect to of the covering of the conductor. In other words, the foam resin is filled in a surrounding space defined by the connection portions of the conductor and the terminal for matching the impedance of the covering of the conductor (See page 10, lines 13-25; Figs. 3, 4B, 6, 10, 12).

In contrast, neither Moore et al. nor Knapp et al. teach anything about the impedance control means of the connection portions of the conductor and the terminal. Further, it is noted that a plastic material (18, 19) of Beamenderfer et al. is integrally formed by two steps to fix wires (4,5) as well as sealing (See column 5, lines 16-28; Fig. 6) .

Consequently, Applicants respectfully submit claim 1, as amended, is allowable over the applied prior art for at least this reason. Further, because independent claims 8, 13, 14, 15, 17, 18 and 19 recites similar features, these claims are allowable over the applied prior art for the

same reasons set forth above. Lastly, claims 2-7, 9-12, 16 and 20-21 are allowable, at least by virtue of its dependency.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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